

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claim 1 has been amended to further recite that the claimed process produces a ceramic sheet having not only cracking resistance, but also favorable moldability and uniform consistency. Basis for this is found at the paragraph bridging pp. 10-11, at lines 13-15 of page 13, and in Table 2. That is, the paragraph bridging pp. 10-11 describes that if the kneading portion of the twin screw extruder exceeds 70 vol% of the extruder, excessive kneading may cause remarkable heat generation of a kneaded clay, whereby the fluidity tends to decrease due to the formulation slippage or evaporation of moisture, whereby a sheet with stable quality may not be obtained in some cases. Lines 13-15 of p. 13 describe that the viscosity at which the components of the kneaded clay are uniform and favorable moldability can be obtained must be limited to from 2,000 to 3,000 pa·sc. In the comparative example of Table 2, the kneading portion of the twin screw extruder was 80 vol% of the extruder, resulting in a crack resistance of only “2” and an excessive viscosity in the extruder of 3,500 pa·sc, whereas in inventive examples 1 and 3 the kneading portion of the twin screw extruder was 70 vol% of the extruder, resulting in a crack resistance of “3” and a favorable viscosity of 3,000 pa·sc or less. Thus, the high crack resistance coupled with a viscosity favorable for good moldability and uniform consistency in the examples required that the kneading portion of the twin screw extruder was no more than 70 vol% of the extruder.

Claims 1-4 and 6-14 were again rejected under 35 U.S.C. §103 as being obvious over Ford et al in view of Tsuruta and any one of Takasaki, Eastin et al or JP ‘302. Additionally, Claims 12 and 13 were again rejected under 35 U.S.C. §103 as being obvious over the aforementioned references and JP ‘023.

Applicants again traverse that the cited prior art presents a *prima facie* case of obviousness, for the reasons set forth at pages 6-8 of the prior response filed on January 24, 2011, which traversal is hereby incorporated by reference.

Applicants had also pointed, in the prior response, to the evidence of criticality for the claimed 30 to 70 vol% of the kneading portion. That is, the comparative example 2 of Table 1, which had a kneading proportion of 80%, failed to produce the highest level “3” of cracking resistance, designating no cracking after 3,000 cycles (p. 36). In contrast, in inventive examples 1 and 3, a sheet of the same thickness produced using a kneading portion of 70 vol%, exhibited a cracking resistance of “3.”

The outstanding Office Action has challenged the efficacy of the evidence of criticality in the specification by noting that the crack resistance (“2”) of comparative example 2 is the same as that of inventive examples 7, 14, 16, 17 and 19, all of which were produced using a kneading portion of 70 vol%. However, while the cracking resistance of comparative example 2 was “2,” this was only achieved with raising the viscosity in the kneader to the unsatisfactory level of 3,500 pa·sc, leading to a lack of favorable moldability and uniform consistency in the product. It is only in the inventive examples 1 and 3 that the highest level “3” of cracking resistance was coupled with a viscosity for producing a ceramic sheet having not only cracking resistance, but also with favorable moldability and uniform consistency.

Claim 1 now further recites that the claimed process produces a ceramic sheet having both cracking resistance and also favorable moldability and uniform consistency, i.e., by limiting the viscosity in the extruder to 3,000 pa·sc or less. The specification provides evidence that this viscosity cannot be maintained with a kneading portion of 80 vol% and so provides evidence of criticality for overcoming any *prima facie* case of obviousness that may be raised by the cited prior art.

It is respectfully requested that the withdrawn dependent claims also be included in any patent issuing from this application.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early notice of allowability.

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